Exhibit 1

PATENT APPLICATION
DOCKET NO. 200209419-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	Alexey S. Kabalnov et al.
SERIAL NO.:	10/623,001
FILED:	July 18, 2003
TITLE:	DYE SETS AND INK SETS FOR INK-JET INK IMAGING
ART UNIT:	1755
EXAMINER:	Helene G. Klemanski
DOCKET NO.:	200209419-1

CERTIFICATE OF DEPOSIT UNDER 37 C.F.R. § 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail, postage prepaid, under 37 C.F.R. § 1.8 on the date indicated below and is addressed to Assistant Commissioner for Patents, Washington, D.C. 20231.

Name: Catie Weaver

June 24, 2005
Date of Deposit

DECLARATION OF
Alexey S. Kabalnov, Charles Dupuy, Luanne J. Rolly, and Naomi Oak
UNDER 37 C.F.R. § 1.131

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I, Alexey S. Kabalnov, Charles Dupuy, Luanne J. Rolly, and Naomi Oak, each declare as follows:

1. I am a named inventor in the above-captioned application and the subject matter described and claimed therein.

2. It is my understanding that various claims in the above-recited patent application have been rejected in view of U.S. Patent 6,843,838.

3. It is further my understanding that the U.S. 6,843,838 patent has a 102(e) priority date of December 31, 2002.

4. The invention as described and claimed in the above-reference patent application was conceived and reduced to practice prior to December 31, 2002. I oversaw at least a portion of the development of the dye sets and ink sets claimed in U.S. Patent Application No. 10/623,001, which development was conducted prior to December 31, 2002. Exhibit 2 contains a redacted version of a report documenting the development and reduction to practice of the invention, which report was prepared by Alexey Kabalnov and Charles Dupuy prior to December 31, 2002.

5. I declare that the dye sets and ink sets shown on page 118 of the attached lab notebook (Exhibit 2) set forth the claimed dye sets and ink sets. Specifically, cyan inks CL and BL both include phthalocyanine dyes; magenta inks 50, 52, and 54 each include copper- or nickel-containing azo dyes, and yellow inks OY and A1Y (or AY1) yellows each include the dye shown in Formula 1 of the independent claims.

6. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful, false statement may jeopardize the validity of the application or any patent issuing thereon.

DATED this 23 day of June, 2005 _____
Alexey Kabalnov

DATED this _____ day of June, 2005 _____
Charles Dupuy

DATED this _____ day of June, 2005 _____
Luanne J. Rolly

DATED this _____ day of June, 2005 _____
Naomi Oak

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DATED this _____ day of June, 2005 _____
Alexey Kabalnov

DATED this 22 day of June, 2005 _____
Charles Dupuy

DATED this 22 day of June, 2005 _____
Luanne J. Rolly

DATED this 22 day of June, 2005 _____
Naomi Oak

Exhibit 2

Project No.

116 Book No. TITLE Agate Dye Sets

From Page No. 4/a

Dye-based ink-jet cyan-magenta-yellow ink sets

Alexey Kabalnov, Charles Dupuy

Ink-jet printing is usually done with 3 color inks: cyan, magenta and yellow. It is important that the set provides both a good gamut and permanence, that is , lightfastness, airfastness and humidfastness. In order the inks to cover the largest gamut, one needs to optimize the chroma and hue angle of each ink. One also needs to minimize unwanted absorbances in the spectra of cyan, magenta and yellow, so the secondary colors, that is, red, green and blue, will be chromatic enough.

One also needs to make reasonable trade-offs between the gamut and permanence, because the brightest dyes tend to be less permanent and vice versa.

Finally, some dyes exhibit an unwanted pink sheen known as bronzing. Although bronzing is normally caused by the cyan dyes, it is the most visible over the blue areas, and is somewhat affected by the composition of magenta ink.

The following ink formulations were found to have optimized colors, bronzing, and permanence. The dye concentrations are expressed as absorbances at 1: 10000 dilution at the peak wavelength. The usable range of concentrations is within x2 of those specified in the tables. A wide variety of ink vehicles can be used in conjunction with this dyes. In particular, A1 and A2 ink vehicles are usable. The formulation of A1 and A2 ink vehicles is shown below.

Ink Vehicle A2

Component	Weight %
thrimethylolpropane	7.5
2-pyrrolidionone	6.5
1,5 pentanediol	8
EDTA di Na salt	75 ppm
Trizma base	0.2
Mg nitrate hexahydrate	3
Tergitol 15S7	1
Tergitol 15S5	1
Dowfax 8390	0.4
Water	balance

Ink Vehicle A1

Component	Weight %
thrimethylolpropane	12
2-pyrrolidionone	6.5
1,5 pentanediol	2
EDTA di Na salt	75 ppm
Trizma base	0.2
Tergitol 15S7	1
Tergitol 15S5	1
Dowfax 8390	0.4
Water	balance

To Page N

Witnessed & Understood by me, Patricia Wa Luanne J Kelly

Date [redacted]

Invented by Alexey Kabalnov, Charles Dupuy

Recorded by Alexey Kabalnov

Date [redacted]

Cyans

Cyan Ink Code name	[redacted]	Projet Cyan 485 (Avecia, commercial)	Projet Cyan 854 (Avecia, Commercial/under development)	AB9 (Sensient, Commercial)
[redacted]				
BL	-	-	0.19	-
CL	-	0.17	-	0.05
[redacted]				

Magentas

Magenta Ink Code name	[redacted]	DJR814 Magenta (Mitsubishi, commerical)	[redacted]	[redacted]	AR52 (Sensient, Commercial)
50	-	0.15	-	-	-
52	-	0.12	-	-	0.1
54	-	0.10	-	-	0.15
[redacted]					

Yellows

Yellow Ink Code name	[redacted]	Ilford Y1189, Commercial	AY17, Sensient, Commercial
[redacted]			
OY	-	0.15	0.05
AY1	-	0.20	-
[redacted]			

Ink sets can be based on the permutations of CMY inks described above. The preferred combinations are indicated below. The table also indicates the gamut volume and permanence numbers for the sets, according to Wilhelm testing procedure. Some of the ink sets are similar to those that have been described

To Page No. 118

Read & Understood by me, [redacted] Date [redacted]

Invented by Charles Pugnet, Alexey Kabalnov

Recorded by Alexey Kabalnov

Date [redacted]

before in Disclosure 10012710 "Dye Sets for High Plain Paper Gamut and Improved Lightfastness on Swellable and Porous Media" by Patricia Wong and Alexey Kabalnov

Code name	Cyan Code Name	Magenta Code Name	Yellow Code Name	Gamut volume on HP Premium Photo Paper (Archie), 1000 LAB	Gamut Volume on Gobi (HP film paper) 1000 LAB	Lightfastness on Archie, years to failure, unprotected	Lightfastness on Gobi, Glass-protected years to failure	Airfastness on Gobi, days to failure
MF54	CL	54	OY		455			420
[redacted]								
A2S	BL	50	A1Y	392	425	40	47	310
[redacted]								

One can see that the permanence of the dye sets is considerably improved over the [redacted] dye set, without the loss in gamut.

Witnessed & Understood by me,
Patricia Wong
Lorraine J Kelly
Date [redacted]

Invented by Alexey Kabalnov, Charles Nagy
Explained by Alexey Kabalnov
[redacted]